



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2023-2145; Project Identifier MCAI-2023-00358-T]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for all Bombardier Inc. Model BD-100-1A10 airplanes. This proposed AD was prompted by a report of a steering control unit (SCU) filter plate connector that does not meet the certification requirements for exposure of electronic components to high intensity radiated field environments, which could result in malfunction of the nose wheel steering (NWS) system. This proposed AD would require determining if the SCU is an affected SCU, replacing all affected SCUs, and rigging and testing the NWS control. This proposed AD would also prohibit installing an affected SCU on any airplane. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-2145; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For service information identified in this NPRM, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](https://www.bombardier.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

**FOR FURTHER INFORMATION CONTACT:** William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7301; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2023-2145; Project Identifier MCAI-2023-00358-T” at the beginning

of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7301; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Background**

Transport Canada, which is the aviation authority for Canada, has issued Transport Canada AD CF-2023-13, dated February 24, 2023 (referred to after this as “the

MCAI”), to correct an unsafe condition on all Bombardier Inc. Model BD-100-1A10 airplanes. The MCAI states that the manufacturer of SCU part number (P/N) 46000–01 introduced a new filter plate connector that does not meet the certification requirements related to the susceptibility of electronic components to high intensity radiated field. According to the MCAI, this non-compliant filter plate connector, if not replaced, could result in a malfunction of the NWS system and cause un-commanded steering or lateral excursion from the runway. The MCAI requires removing and replacing all affected non-compliant SCUs. The FAA is proposing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-2145.

#### **Related Service Information under 1 CFR Part 51**

The FAA reviewed Bombardier Service Bulletin 100-32-34, dated October 18, 2021, and Bombardier Service Bulletin 350-32-010, dated October 18, 2021. This service information specifies procedures for determining the serial number of SCU P/N 46000-01, replacing any affected SCU, and rigging and testing the NWS control. These documents are distinct since they apply to different airplane serial numbers. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA’s Determination**

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA is issuing

this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Proposed AD Requirements in this NPRM**

This proposed AD would require an inspection or records review to determine if the SCU is an affected SCU, replacement of all affected SCUs, and rigging and testing of the NWS control. This proposed AD would also prohibit installing an affected SCU on any airplane.

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 725 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
9 work-hours X \$85 per hour = \$765	\$44,950	\$45,715	\$33,143,375

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Bombardier Inc.:** Docket No. FAA-2023-2145; Project Identifier MCAI-2023-00358-T.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by  
[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL  
REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Bombardier Inc. Model BD-100-1A10 airplanes,  
certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Unsafe Condition**

This AD was prompted by a report of a steering control unit (SCU) filter plate connector that does not meet the certification requirements for exposure of electronic components to high intensity radiated field environments. The FAA is issuing this AD to prevent malfunction of the nose wheel steering (NWS) system. The unsafe condition, if not addressed, could result in un-commanded steering or lateral runway excursion.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspection or Records Review**

Within 24 months after the effective date of this AD: Inspect the SCU to determine if SCU part number (P/N) 46000-01 with a serial number listed in Figure 1 to paragraph (g) of this AD is installed on the airplane. A review of the airplane maintenance records is acceptable in lieu of the inspection if the SCU P/N and serial number can be conclusively determined from that review. If an SCU P/N 46000-01 with a serial number listed in Figure 1 to paragraph (g) of this AD is not installed on the

airplane, or if the SCU identification plate is marked with SB100-32-030, then no further action is required by this AD; however, the installation prohibition in paragraph (i) of this AD still applies.

**Figure 1 to paragraph (g) – *Affected SCU Serial Numbers***

06-188, 16042190, 16047519, 16047521, 16047522, 17053050, 17053052, 17054845, 17054846, 17054847, 17055273, 17055274, 18057933, 18057934, 18058184, 18058185, 18058599, 18058600, 18058601, 18058602, 18058884, 18058885, 18058886, 18059357, 18059358, 18059359, 18059360, 18059814, 18059815, 18059816, 18059817, 18060201, 18060202, 18060582, 18060789, 18060982, 18060983, 18061292, 18061572, 18061573, 18061770, 18061771, 18061880, 18061881, 18061995, 18061996, 18062731, 18062732, 18062733, 18062734, 18063183, 18063184, 18063520, 18063521, 18064776, 18064777, 18064778, 18064779, 18065323, 18065324, 18065325, 18065326, 18065327, 18065331, 18065332, 19068045, 19068046, 19068047, 19068048, 19068049, 19068050, 19068051, 19068052, 19068053, 19068054, 19068055, 19068056, 19068057, 19068058, 19068059, 19068060, 19068061, 19068062, 19068063, 19068064, 19068065, 19068066, 19068067, 19068068, 19068069, 19068070, 19068071, 19068072, 19068073, 19068074, 19072062, 19072063, 19072067, 19072068, 19072069, 19072070, 19072071, 19072072, 19072073, 19072074, 19072075, 19072076, 19072077, 19072078, 19075712, 19075713, 19075714, 19075715, 19075716, 19075718, 19075719, 20077461, 20077462, 20077463, 20077464, 20077465, 20077466, 20077467, 20077470, 20077472, 20077473, 20077474, 20077476, 20077477, 20077478, 20077480.



## **(h) Replacement**

For airplanes with SCU P/N46000-01 with a serial number listed in Figure 1 to paragraph (g) of this AD installed and not marked on the SCU identification plate with SB100-32-030: Within 24 months after the effective date of this AD, replace the SCU and rig and test the NWS control, in accordance with the instructions in paragraph (h)(1), (2), or (3) of this AD, as applicable.

(1) For airplane serial numbers 20001 through 20500 inclusive: Steps 2.C.(1) and 2.C.(3) of Section 2.C., “Part B – Modification,” and Section 2.D., “Testing,” of the Accomplishment Instructions in Bombardier Service Bulletin 100-32-34, dated October 18, 2021.

(2) For airplane serial numbers 20501 through 20893 inclusive: Steps 2.C.(1) and 2.C.(3) of Section 2.C., “Part B – Modification,” and Section 2.D., “Testing,” of the Accomplishment Instructions in Bombardier Service Bulletin 350-32-010, dated October 18, 2021.

(3) For airplane serial numbers 20894 and larger: A method approved by the Manager, International Validation Branch, FAA; or Transport Canada; or Bombardier Inc.’s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

## **(i) Parts Installation Prohibition**

As of the effective date of this AD, do not install SCU P/N 46000–01 on any airplane if the serial number of the SCU is listed in figure 1 to paragraph (g) of this AD, unless the SCU identification plate has been marked with SB100-32-030.

## **(j) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested

using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (k)(2) of this AD. Information may be emailed to: 9-avs-nyaco-cos@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or Transport Canada or Bombardier, Inc.'s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Additional Information**

(1) Refer to Transport Canada AD CF-2023-13, dated February 24, 2023, for related information. This Transport Canada AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-2145.

(2) For more information about this AD, contact William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7301; email 9-avs-nyaco-cos@faa.gov.

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 100-32-34, dated October 18, 2021.

(ii) Bombardier Service Bulletin 350-32-010, dated October 18, 2021.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](http://bombardier.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov).

Issued on October 31, 2023.

Victor Wicklund, Deputy Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2023-24566 Filed: 11/9/2023 8:45 am; Publication Date: 11/13/2023]